North Dakota LEGENDARY
Public Service Commission

Site Inspection Trip Report
Case No. PU-14-842 Dakota Access Pipeline Project
PU-742-16 Keitu Engineers & Consultants, Inc.

Site/Project Location: MP 136 to 140 Spread 7-8 NW St. Anthony **Date of Inspection:** 4 October 2016

Inspected 4 miles of pipeline ROW approximately 8 miles NW of St. Anthony ND in Morton County.

Observed Work / Weather Conditions

Visited 12:00 - 3:00 pm. Mostly cloudy to overcast skies. Unrestricted visibility. SW wind at 14-18 mph gusts to 24 mph. No precipitation during visit, roughly 0.3" of rain prior day. ROW ground saturated with standing water in trenches. Temperature 52-59 °F.

Tie-in and HDD crews were active. Protesters have been shutting down construction crews frequently. MP 139.5 HDD pilot hole completed; reaming in progress. HDD equipment was staged over mats with limited soil disturbance. Diesel fuel tank within steel containment. Covering line in trench with subsoil to subgrade in most locations. ROW survey stakes remain. Exclusion zone near M.P. 138.5 was marked with red banner flags.

Top Soil Management / Condition / Erosion Control / Stormwater Management

Topsoil and subsoil segregation appeared to be adequate. Topsoil depth was 3-4" on hilltops while up to 12" on the bottom of hill slopes. Subsoil piles from trenching were bordering and partly overlapping with the topsoil pile (see photo 4). Subsoil pile from HDD bore entry pit was stored over unstripped ground (photos 2-3). Lead inspector claimed he was advised by an Ag Inspector to place straw mulch under the pile when piling on topsoil. Straw mulch was not visible during site visit in these areas. Previous day's rainfall appeared to have caused most of the overlapping. Two areas had subsoil cast on or plowed onto adjacent topsoil in limited duration. Storm water BMPs remain in place and in good repair. Drainage points protected with straw bales or silt fence were cleared of silt. One area observed had a few large soil chunks roll off ROW less than one foot.

Vegetation Condition

Tree removal area at M.P. 137.75 appeared to be narrowed consistent with PSC order. Water body crossing at M.P. 139.5 was currently being reamed for boring. Matted road was built between HDD bore pads.

Depth of Cover / Road Crossings / River Crossings / Riparian Condition at HDD Bore Sites

Open trench areas observed appeared to be at specified depth or deeper. Silt fence was implemented to prevent any sediments from entering. Matted road was built over the crossing as it connects HDD bore pads.

Other Project Issues

ROW access is not permitted for 20 miles starting at Lake Oahe heading west. Protesters have been shutting down crews frequently. Many workers have quit due to high media coverage.

Deficiencies

Most areas had subsoil trench pilings bordering the topsoil piles. As noted, previous day rainfall appeared to have caused some of this. A few areas had subsoil on topsoil pile most likely due to plowing, these areas were of short duration and infrequent. Small subsoil pile from bore entry pit was stored over unstripped ground. This practice is contrary to the construction's mitigation plan.

Actions Taken/To Be Taken

Keitu inspector advised Tie-in/Trenching Chief to practice having a definitive gap between topsoil and subsoil piles. Follow-up with the North Dakota Department of Agriculture to confirm if they advised contractor to place straw beneath subsoil stacked on topsoil.

Keitu Inspector: RJS **Inspection Report Submitted:** 1 September 2016

Report Photo #1 "M.P. 139 HDD Pad – Recycle Mud Pit & Diesel Tank": 46.63878°N 101.04598°W

Report Photo #2 "Subsoils from HDD Bore Entry Pit on Unstripped Ground: 46.63866°N 101.04600°W

Report Photo #3 "No Straw Mulch Visible Under Bore Pit's Subsoil Pile: 46.63886°N 101.04632°W

Report Photo #4 "Trench Subsoils Bordering/Overlapping with Topsoil Pile: 46.63897°N 101.05932°W

Report Photo #5 "Soil Separation & Tree Clearing Area Adequate": 46.75056°N 101.21344°W

Report Photo #6 "Trench Back-filling": 46.64743°N 101.08162°W

Report Photo #7 "Topsoil & Subsoil Pile Storage Overall Adequate": 46.63888°N 101.06883°W

Project Map Inspection Location: Northwest of St. Anthony, ND